THE

DEFENSE

OF

The Great Lakes;

ITS NECESSITY,

AND THE

QUICKEST, CHEAPEST, AND BEST WAY TO ACCOMPLISH IT.

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To the Honorable the Congress of the United States, and the Legislature of the State of New York.

The New York Herald of a late date contained an article from the Cincinnati Enquirer of Dec. 29th, 1862, headed, "*Military Movements in Canada.*"

It states that during the past summer, arms, equipments, &c., for 100,000 men have been quietly shipped to Quebec by the British government, and that forty iron Gun-boats, in sections, ready to put together, have been landed and stored at the Bermudas, with necessary ordinance, &c., for their complete equipment. That this latter was done in pursuance of the report of a Commissioner, sent to Canada from England, who recommended the construction of sixty such boats, for operations upon the Great Lakes.

Whether there is truth in these statements, is not, perhaps, certainly known. But, one thing is certain, if not true now, *they may be* at no distant day.

It is known that great efforts have been making in the British North American Possessions to enroll, organize, arm and discipline the Militia, and that—although at first some difficulties were interposed by the Colonial Governments—these efforts are far more successful than any similar attempt has been in any of our Northern States.

The preparations made by the British Government, in view of the Trent affair, are still mostly available.

Does it not behoove our Government to give these matters attention?

The preparations for warlike operations, by land and sea, which have thus been made, would seem, by their magnitude, to indicate something more than the ordinary precautions,

which prudence might require, in view of the disturbed condition of an adjacent and coterminous country.

It may well be, that the British Government "*did not think that the proper time had yet arrived*"—"*that the moment was not opportune*," when Napoleon proposed a joint intervention in our affairs, *because* her preparations were not yet completed.

To fully complete them, and, at the same time, to be in a condition to make them promptly available, Great Britain will now require, at least, the opening of another summer.

The ice of the St. Lawrence will defend us against *Iron-Clads* upon the Lakes until spring, and it is safe to assume that we shall have no "*intervention*" from that quarter before the breaking up of this wintry barrier.

It has long been evident, that our treaty with the British, by which each party was limited to a single vessel of war, with one gun, upon each of the great Lakes, was a treaty which entirely hampered us, and hardly restricted them.

They can, at their leisure, build and equip elsewhere, and, without loss of time bring into all the great Lakes—except Superior—any number of war vessels they choose, in case of emergency.

We, when an urgent occasion arrives, would have yet to build and equip our Lake fleets, and that, too, in unfortified and mostly defenseless harbors, already blockaded by an overwhelming force.

When this stipulation was made, its inequality was not so glaring. But the British Government, in no long time, set to work, and by the construction of the canals around the Rapids of the St. Lawrence, and the Welland Canal, practically turned this stipulation into an incalculable advantage for itself.

The Welland Canal, connecting Lakes Erie and Ontario,

is 28 miles in length, overcomes an elevation of 330 feet by a series of locks 150 feet long and 26½ feet wide, calculated to pass craft drawing nine feet of water and of 500 tuns burthen.

Around the Rapids of the St. Lawrence there are seven different canals, in all, 41 miles, overcoming an aggregate elevation of 200 feet, by locks 200 feet by 45 feet inside the gates, calculated to pass craft of 1000 tuns. The trunk of these canals—of the St. Lawrence—is 100 to 140 feet wide on surface, and 10 feet deep.

All these vast works were done, of course, professedly in the interest of commerce.

The London Times did not thunder it forth that these great inland seas had now become "British Lakes."

It never informed us that all our $400,000,000 of annual trade, in peaceful ships upon their bosoms, and our thriving cities—the greatest grain marts of the world—upon their undefended harbors, existed only by British sufferance; and that, in any sixty days of a fair summer, a hostile fleet, entering by these channels, could utterly destroy trade, ships, and cities.

The British Government and the British press are too reticent of State secrets and State projects for this.

Yet, so the fact has been, at all times, since the opening of these great artificial channels upon Canadian soil.

But, lulled in the fatal security of a seemingly endless peace, we have failed to see it, or, if seen, to appreciate.

We have been, all along, as the event has proved, practically without an army or a navy.

Yet, we considered ourselves invincible and irresistible, and feared nothing, because we knew nothing.

The Grand Seignior—in Philip the Second's time—speaking of that spunky little sand-spit and marsh, called Hol-

land—proudly said, that, if it should trouble him, as it did the Spaniard, he would send his men, with shovels and pick-axes, and throw it into the sea.

So we, at the North, were of the opinion, that, if the Cotton States should be "precipitated into revolution," we could go down any morning and shovel them into the Gulf.

And as to Canada, &c., in the event of hostilities with Britain, we could presently overrun all the British Possessions in North America, and re-annex them without more ado.

Out of the present rebellion has come to us a bitter knowledge of the neglected lesson, "in time of peace prepare for war," and also the bitter knowledge that a great and powerful people may be sadly taken unawares by a community far less powerful in ultimate resources, but more vigilant and provident.

It is easy to see, in the light of our recent experience, and of the facts above stated, that if hostilities with Great Britain should open with the ensuing spring, or any subsequent spring, in our present relative state of preparation, we should not only stand no chance of overrunning Canada, but would immediately find more than we could do to guard our frontier, and protect our Lake cities from bombardment and destruction by the "Dev'lish Enginery" of Iron-clads.

We cannot, under the treaty, build a war vessel upon the Lakes. The attempt to do so might be taken as a *casus belli*.

We have no other place, to build them, that will serve the purpose.

What shall be done? Do as the French Ruler did, when he wanted a safe and capacious Naval Depot and harbor for construction at Cherbourg—*make one*.

But, where can be found the place, which shall best com-

bine all the prime requisites existing naturally, or capable of artificial development with the greatest facility?

What we want is an accessible inland water, of sufficient depth and extent, not exposed to attack of an enemy; favorably situated for the collection of materials and supplies; for the furnishing, residence, and subsistence of the necessary laborers and employees; affording facilities for the requisite branches of manufacture by machinery, and room enough for the necessary grounds and structures.

Such a place is found in the Cayuga Lake. It answers all the requisites.

It is distant, at its foot, from Great Sodus Bay—of Lake Ontario—in an air line—less than twenty miles. It is a body of water forty miles in length, from one and a half to four miles in width, and of great depth.

It communicates, by canal, with the Erie Canal at its foot, and with the Seneca Lake and Crooked Lake. The Seneca Lake, by canal, with the Susquehanna through the Chemung River and the North Branch Canal, in Pennsylvania, and all its connections. By railroad it is crossed by the N. Y. Central at its foot, it reaches the N. Y. & Erie Road at its head by the Cayuga Division of the Delaware, Lackawanna & Western. It is thus in communication by canal and rail with the great lumber, coal and iron producing regions of the country, and with the great commercial centers of the Union. It is particularly convenient to the iron and coal of Pennsylvania, which would be the great *desiderata* in the construction of iron or iron-clad vessels, and their armament.

If wooden structures are required, in addition to the means of obtaining materials from other sources, there are still vast quantities of the best oak, as well as other hard woods, and pine, in the immediate vicinity of the Lake. It

is now the great center of boat building, turning out more boats for the lake, river and canal navigation, than any locality in the State. The boat-yards at Ithaca—at the head of the Lake—have built and fitted, complete, during the past season, no less than seventy boats of the best and largest class, giving employment to some two hundred skilled workmen. The Ithaca boats are seen everywhere, from Cleveland to New York, and a number of them did good duty, as transports, on the York and James, during the Peninsular campaign.

The country around Cayuga Lake is celebrated as the richest and most productive agricultural region in the State, and can supply an army, if need be, from one year's end to another.

At Ithaca are some 6000 inhabitants, engaged in various branches of trade and manufacture, for which see the Gazetteers. As *germane* to the matter in hand, it may be mentioned that there are three large flouring mills, and as many large foundries and machine shops. Here, too, are unequalled facilities for the use of water as a motive of machinery —the number of sites and the quantity of water being practically inexhaustible. At the immediate head of the Lake, grounds of any required extent can be had, adjacent to deep water, by a comparatively inexpensive filling and wharfing, or, by a little dredging, large gun-boats and other war vessels can float for a mile upon an Inlet which now floats the largest craft of the Erie Canal, and the steamers navigating the Lake.

There remains the question of *accessibility*, of egress and ingress. There will be required a canal, of sufficient capacity to float and pass such vessels as may be desired between the Cayuga Lake and Lake Ontario, and, to complete the whole system of Lake defense from Ontario to Superior, the

enlargement of the Erie Canal from Buffalo to a point near the village of Clyde, in Wayne county, or to a point a little further East, in the Cayuga marshes, as hereinafter explained.

There are two somewhat different but feasible routes for the canal from Cayuga Lake to Ontario. One is down the outlet some four and a half miles to the mouth of the Clyde River, up that river about ten miles to or near the village of Clyde, there lock through or over the Erie Canal, thence about eleven miles to Great Sodus Bay. Another is, down the outlet, as above, about five miles to the Erie Canal, lock over it in the marshes, thence straight through the marshes and the country beyond, on a line east of the line from Clyde, to Great Sodus Bay.

By the latter route, the water for the canal can be taken from the Cayuga Lake, except for the lockages over the Erie Canal, which must be supplied from the latter.

By the former route the water may all be supplied from the Erie Canal—from Lake Erie—or partly by a feeder from Cayuga Lake.

By the latter route, the whole prism of the canal will require to be excavated or built up; *by the former, the excavation is now almost wholly made by nature and by art, and little excavation would be necessary, except for the locks, and the proper arrangement of the levels.**

The difference in elevation, between Lakes Ontario and Cayuga, is about 156 feet. No lock would be required for the ascent of the Clyde River. This river is a deep, sluggish stream, as far as it would be necessary to ascend it, and would only require a small sum for clearing it of some fallen trees, and drift deposits, formed by these accidental obstructions.

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* See Note (a) in Appendix.

For a distance of some 2300 feet above the outlet of the Cayuga Lake, the channel would require dredging to a moderate depth, as, also, would the outlet, at one or two points below, where bars have formed.

This dredging would be cheaply and easily done. From the nature of the bottom and the rate of descent, it is believed that, once done, the channel would be kept clear, by the combined action of the current and passing boats.

At either point of crossing, the embankment, carrying the Erie Canal, is 18 feet above the adjacent level.

Great Sodus Bay is some seven miles deep, and one to four miles in width.

It has an abundant depth of water, and is, by far, the largest, best, and most accessible harbor upon the American side of the Great Lakes.

Fleets can ride securely, and with room to manoeuvre, in its waters, safe from the guns of an enemy in the Lake.

The gates of the harbor are easily capable of being made impregnable against any assault by Lake or by land.

There are, also, islands in the bay, affording facilities for shelter, and further fortifications if desired.

These are the principal facilities for the construction of the "Sodus Bay Canal," and an interior Naval Depot, and these the difficulties to be overcome.

It is easy to see that the former are great, the latter slight.

An urgent reason why this work should be undertaken and pressed to completion, is the fact, that an enemy, in possession of Lake Ontario, would now find Great Sodus Bay the least defended, and in all respects the most favorable point for landing a powerful force, and thence, by a rapid march, cutting the State through the centre, and severing all its great lines of communication between the East and the West.

The Connection of Lakes Erie and Ontario.

In order to the navigable connection of Lake Ontario with Erie and the other "Upper Lakes," two ways present themselves.

One by a new Ship Canal around the Falls of Niagara—which would, of course, be independent of the proposed Sodus Bay Canal—the other, in connection with the proposed canal, by the enlargement of the Erie Canal between the point of intersection with it and Buffalo, as before mentioned.

The construction of the Ship Canal around the Falls alone, would merely connect the Lakes, without, in any manner providing for the *indispensable* naval depot and place of construction *outside* of the Lakes themselves.

These being provided for by the proposed canal from Cayuga Lake, the question of connection lies between the Falls project and the enlargement of the Western Division of the Erie.

The Erie Canal is now 70 feet wide at the surface and 52 at the bottom, and it is said there are nine feet of water in it from Lake Erie to Lockport, covering the most difficult part of the necessary excavation.

Inasmuch as the Lake vessels of war would be seldom moved through this channel, there would be no need of widening the prism of the canal, except at suitable intervals for turn-outs.

Apart from these turn-outs, there would be no excavation necessary, unless for the purpose of bottoming out to obtain greater depth of water. The locks, or one tier of them, would have to be enlarged. By this mode of enlargement and bottoming out, the quantity of water flowing East from Lake Erie, would be sufficiently increased to furnish all the water needed thence for filling and operating the proposed canal to Sodus Bay.

The distance on the Erie Canal from Buffalo to the point of crossing with the canal to Sodus Bay—if the Clyde route were adopted—would be about 142 miles.

It is evident that the enlargement of this distance, in the manner suggested above, would be much less expensive than a new canal around the Falls of Niagara.

Besides the greater commercial advantages, that would ultimately result from this mode of connecting Lakes Erie and Ontario, by reason of the probable final enlargement of the remainder of the Erie Canal, there are also great military or naval advantages over any other mode.

It is more defensible, as well as less costly, than the route from Lake to Lake immediately around the Falls ; and, by reason of the independent naval depot in Cayuga Lake, a force could be put upon Ontario or the Upper Lakes with *secresy* and *celerity*. We *must* have means of passing to and fro between Ontario and Erie, because the British have. And if we can throw the whole or any desired part of our force upon *either* Lake, or upon *both*, at the same time, from an *independent base*, we have a great advantage.

From *their* independent base—of the St. Lawrence—they can only reach the Lakes *in succession*.

By a combination of local interests, East and West, the gigantic project is now being pressed upon Congress of suitably enlarging the Illinois & Michigan Canal, so as to reach Chicago with gun-boats from the Mississippi, and the Erie and Oswego Canals, so as to pass the like craft from the Hudson to Lakes Erie and Ontario.

This project doubtless presents great prospective commercial advantages ; and accordingly the New York *Chamber of Commerce* have memorialized Congress to undertake it—the memorial having been prepared by Hon. Samuel B. Ruggles.

But, to aid or execute "Internal Improvements" of this class, for commercial purposes *merely*, is believed to be outside the jurisdiction, as it certainly is contrary to the established policy of the general Government.

The military bearing of the undertaking ought only to be considered.

In the first place, from the proximity of materials and subsistence, it is believed that suitable war vessels for the Lakes can be constructed at least as cheaply on Cayuga Lake, as at any other available point. It is supposed that more of our Navy, constructed for marine and sea-coast duty, are, and will be, of a larger class than will pass through any proposed enlargement of the New York Canals, so that vessels of the same draft could not be profitably used alternately on the sea and the Lakes.

In the next place, the gun-boats used upon the Mississippi and its tributaries, are, of necessity, *sui generis*.

They are very broad, flat-bottomed, and of light draft.

They are scows. Upon our Great Lakes—as tempestuous, at times, as the Atlantic itself—they would be out of their element, and a very unequal match for craft constructed upon sea-going models.

Vessels of the latter class, suited for Lake navigation, if floated from the Lakes to the Mississippi, would be useless there, by reason of their too great draft.

Indeed, it has been lately stated, in the public prints, that the proposed enlargement of the Illinois & Michigan Canal contemplates an ultimate depth of only six feet. This is, doubtless, full as great a depth as can be made useful. The boats, used for the navigation of the upper Mississippi and its tributaries, rarely exceed three feet draft, and, more frequently, draw less than two feet. Except at high water, the Illinois River itself—which forms a considerable part of the

route of this communication, will not float such boats as now ordinarily navigate the Erie Canal in its shallowest parts.†

For reasons above suggested, it is evident that an interchange of gun-boats between the waters of the Atlantic and those of the Mississippi, through the Illinois and New York Canals, would be impracticable, and if practicable would be useless.

The truth is, our Western rivers and our maritime coasts require each a naval system peculiar to themselves. Neither system is well adapted to the Great Lakes, and they also require a peculiar system.

These great Inland Seas, spanning sixteen degrees of longitude along our Northern border, and furnishing a coast line of more than 3000 miles, laving the shores of a vast country, the richest in the world in its capacity for productions of the farm, the forest and the mine, and already bearing upon themselves, and their outlets through our territory, a commercial tonnage greater than that of any European nation, demand, at the hands of our Government and people, an independent and powerful system of protection and defense—one that shall be always and instantly available.

While the natural obstructions to the navigation of the St. Lawrence existed, the treaty stipulation with Great Britain, limiting the number of vessels of war, left the parties to it upon an equality.

But the opening of that river and of the Welland Canal has *practically* made that stipulation one by which we are limited as before, but the British are allowed to keep upon the Lakes as large a fleet as they please.

It is only in case of war with that powerful nation, with her large navy and her great and constantly employed means of increasing it, that we should want a navy upon the

† See Note (b) Appendix.

Lakes at all. A war with that power, so far as *aggression* by her is concerned, would be mostly a naval war. And, for her *defense* of her Canadian possessions, she would wisely rely, principally, upon her command of the Lakes, by means of a superior fleet, constructed expressly for that purpose.

In such a war, our *maritime* navy would be otherwise sufficiently employed in the defense of our sea coast, or in cruising against the enemy upon the high seas, and the emergency might be such, that detachments from *it* could least be spared from the sea coast, when most needed upon the Lakes.

The project, now being pressed upon Congress, of enlarging the New York and Ill. & Mich. Canals so as to open a gun-boat communication from the Mississippi to the Atlantic, apart from the difficulties above suggested, will be a work of immense cost, and, what may be of more consequence, will require a long time for its completion. The work advocated in this article, on the score of economy and dispatch, is far preferable, and is demanded by every consideration of prudence and safety.

The dominion of the Great Lakes is the dominion of all the vast and fertile country adjacent to them, and, it is safe to say, that any Power, which holds them permanently, is ruler of all the Northern and middle portions of North America.

Even if it were deemed advisable, *eventually*, to accomplish the great and laborious work of a ship canal from the Mississippi to the Atlantic, the project here advocated should be entered upon *first, and without delay*, because it is a necessary and indispensable part of the whole grand scheme, and would answer the purpose of the whole for the time being.

The connection with Lake Ontario, it is believed, can be accomplished as cheap, and more advantageously, by the pro-

posed canal to Sodus Bay, than by the Oswego Canal, the distance being shorter and the excavation comparatively nothing.

What is of infinitely greater importance, is the capacious, safe and defensible harbor of Sodus Bay, while that of Oswego is difficult of access, cannot secure its shipping from the guns of a hostile fleet upon the Lake, and is, with all the money expended upon it, now too small for its commerce, and is incapable of enlargement except at an incalculable expense.

It has been estimated by competent persons, that the Sodus Bay Ship Canal from the navigable waters of Cayuga Lake to those of Lake Ontario, can be constructed, complete, so as to pass vessels of 1000 tuns for not exceeding $1,000,000.

If this work, with the necessary changes in the Erie Canal, West, from Clyde to Buffalo, were vigorously commenced this winter, it is believed the whole could be sufficiently finished for use by the opening of the season of 1864.

Putting aside, for the present, the gigantic schemes now before Congress, and which will consume so much money and time, that body ought at once to address their attention to this *cheapest*, *quickest*, and *most effectual* mode of defending the Great Lakes, and thereby completely protecting the most assailable and most important part of our frontiers.

If the National Government will issue its bonds for the purpose, it cannot be doubted that the great State of New York will herself promptly undertake and finish the work, giving the United States perpetual right of free passage with vessels of war, transports, &c.

Thus much it is imperatively necessary the General Government should now do—and only thus much.

In more peaceful and prosperous times, the needs of an in-

creasing commerce will, perhaps, demand the execution of the whole great work now under the consideration of Congress, and, when that time comes, the same commerce will easily furnish the means for the attainment of its wants.

The undersigned, citizens of New York, residing in the vicinity of Cayuga Lake, respectfully submit the foregoing facts and views upon a subject of the highest national importance, and pray the earnest attention thereto of the Honorable Bodies to which they are addressed.

Dated January 29th, 1863.

JOSIAH B. WILLIAMS,
H. A. DOWE,
A. B. CORNELL,
G. W. SCHUYLER,
CHAS. E. HARDY,
C. L. GRANT,
L. L. TREMAN,
WILLIAM ANDRUS,
WM. R. HUMPHREY,
D. BOARDMAN.

And others.

APPENDIX.

Note (*a*). A Canal from Cayuga Lake to Great Sodus Bay has long been contemplated. In 1829, the Legislature of New York chartered a company to build a Canal of the same size as the Erie, with a capital of $200,000. In 1835 the charter was renewed and continued for five years. In 1836 an act passed extending the charter ten years, increasing the stock to $800,000, and authorizing the construction of a Canal 100 feet wide and 12 feet deep. Some five or six miles of the route from Sodus Bay is a natural ravine made by a water course, and mostly of sufficient dimensions for a Ship Canal. The remainder of the route to Clyde, partly by digging, and partly by means of turning brooks and torrents into the channel, has been so far excavated that comparatively little remains to be done. In 1851, an act passed renewing and amending the previous acts. This act expired by its own limitation on the 1st of Nov., 1861. In April, 1862, an act passed to the effect that whenever the U. S. Government should provide the means, the Canal Board should enlarge the Erie and Oswego Canals and a single tier of Locks, or build additional Locks, of a size sufficient to pass vessels adequate to the defense of the Great Lakes. And upon the like provision of means, should construct a similar Canal from the Erie, at or near the village of Clyde, to some proper point in Great Sodus Bay. This act gave the United States perpetual right of passage free of toll or charge. It only needs that this act be so amended as to authorize the connection of the Sodus Bay Canal with the Cayuga Lake, and the necessary enlargement of *any part* of the Erie Canal. The connection of the Sodus Bay Canal with Cayuga Lake, might also be attained by further enlarging the Erie from the point of intersection eastward to Montezuma—11 miles—and the Cayuga and Seneca Canal thence to the Cayuga Lake, above the Bridge, about nine miles. But this would largely increase the cost, by rendering necessary the enlargement of the high embankment across the Cayuga marshes, and the great acqueduct over the Seneca River.

Note (*b*). The Illinois and Michigan Canal, connecting Chicago with Peru, at the head of steamboat navigation on the Illinois River, is commonly spoken of as about 102 miles in length. For a part of this distance the channel of the river is used. The excavation, from the Chicago creek, near the city, to the Illinois River, near Joliet, is said to be upon, and partly through, rock. The summit level at the Chicago creek is 12 feet high, *and is supplied with water by pumping from the creek.* The creek at this place is on a level with Lake Michigan. It would, of course, require an immense outlay to reduce this level to that of the Lake. That was the original plan, but it was abandoned on account of its great cost. Andrews, in his Rep. on Lake and Col. Trade, says: "Whether the original plan of this Canal will ever be carried out, is, at least, very problematical, since there are obstacles in the periodical shallowness of the waters of the Illinois which would fustrate the only object of the improvement, to wit., the through navigation of the works by Lake craft."

At high water the Western rivers are navigable. At low water they are navigable as it happens, and only by boats which are popularly said to "run in a heavy dew." The Illinois is of this class of rivers, and even the Mississippi itself. It is known to every one that Com. Farragut's fleet of steamers, capable of navigating the Atlantic, was compelled to fall down the river from Vicksburg to avoid being left high and dry, and that naval operations on that, as well as the other Western rivers, have inevitably been suspended all through the dry season, and until a very recent period.

On this 29th day of January, 1863, it is stated in the New York papers that one of the reasons why Gen. Banks has not yet attacked Port Hudson is, "that the River is not yet high enough for our gun-boats."